

WHAT IS CLAIMED IS:

1. An apparatus for continuously producing an artificial marble plate comprising:

upper and lower carrier films facing each other and receiving a raw material
5 compound for the artificial marble plate into a gap therebetween;

upper and lower horizontal heating plates, each including temperature controlling
means and heating means for heating upper and lower surfaces of the raw material compound at
the same temperature by the same heat transmission manner to harden the raw material
compound, while the upper and lower carrier films moving along a gap between the upper and
10 lower horizontal heating plates; and

a pair of gaskets disposed at horizontal edges of the upper and lower carrier films for
regulating thickness and width of the artificial marble plate obtained by hardening the raw
material compound.

15 2. The apparatus for continuously producing an artificial marble plate as set forth in
claim 1, further comprising:

upper and lower carrier film feed unwinders for feeding the upper and lower carrier
films to the gap between the upper and the lower horizontal heating plates;

a raw material feed tank for feeding the raw material compound for the artificial
20 marble plate into the gap between the upper and lower carrier films;

a raw material overflow prevention block, disposed between the raw material feed
tank and the lower horizontal heating plate, for preventing the raw material compound fed from
the raw material feed tank from flowing over the gaskets;

a contact roll, disposed after the raw material overflow prevention block and before the
25 upper horizontal heating plate, for bringing the upper carrier film into contact with the raw

material compound;

a gasket-protecting film surrounding the gaskets to protect the gaskets;

gasket fixing members and a gasket fixing frame, disposed over the gaskets, for fixing the gasket;

5 vertically movable cylinders, disposed on the upper horizontal heating plate, for controlling the height of the upper horizontal heating plate;

upper and lower carrier film recovery winders, communicated with end parts of the upper and lower horizontal heating plates, for collecting the upper and lower carrier films from the artificial marble plate; and

10 a cutting unit, communicated with the upper and lower carrier film recovery winders, for cutting the artificial marble plate released from the upper and lower carrier films.

3. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, further comprising a carrier film fixture, disposed under the upper carrier film and on
15 the lower carrier film, for fixing the upper and lower carrier films, for fixing the upper and lower carrier films.

4. The apparatus for continuously producing an artificial marble plate as set forth in claim 3, wherein the carrier film fixture includes:

20 a clamping pin;
a chain belt for fixing the clamping pin;
a position adjusting gear for adjusting the position of the chain belt; and
a driving gear for driving the chain belt.

25 5. The apparatus for continuously producing an artificial marble plate as set forth in

claim 1, wherein the heating means includes a hot water heater, a steam heater, or an electric heater unit.

6. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, wherein the heating means heats the raw material compound at a temperature in the range of 30 to 100°C.

7. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, wherein each of the gaskets is made of a circle-shaped or square-shaped tube or pipe.

8. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, wherein the outer diameter or the height of each of the gaskets is 6 to 40 mm.

9. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, wherein each of the gaskets is made of one material selected from the group consisting of polymer and metal; and

wherein the polymer includes Teflon, nylon or rubber, and the metal includes stainless steel, aluminum or copper.

10. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, wherein the gaskets are disposed on the horizontal edges of the upper and lower films with a space of 500 to 1,300 mm.

11. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, wherein each of the upper and lower carrier films is made of one or more materials

selected from the group consisting of polyethylene, polyester, polypropylene and polyvinyl alcohol.

12. The apparatus for continuously producing an artificial marble plate as set forth in claim 1, wherein each of the upper and lower carrier films has a thickness of 20 to 100 μm .

13. The apparatus for continuously producing an artificial marble plate as set forth in claim 2, wherein the vertically movable cylinders for controlling the height of the upper horizontal heating plate are vertically moved by a distance of 0 to 1,000mm.

14. A method for continuously producing an artificial marble plate comprising:

feeding a raw material compound for the artificial marble plate to a space defined by upper and lower carrier films facing each other and a pair of gaskets disposed at horizontal edges of the upper and lower carrier films; and

heating upper and lower surfaces of the raw material compound at the same temperature by the same heat transmission manner to harden the upper and lower surfaces of the raw material compound at the same rate, via a pair of upper and lower horizontal heating plates, while moving the upper and lower carrier films along a gap between the upper and lower horizontal heating plates.

15. The method for continuously producing an artificial marble plate as set forth in claim 14, wherein heating upper and lower surfaces of the raw material compound includes heating the upper and lower surfaces of the raw material at the same temperature in the range of 30 to 100°C.

16. The method for continuously producing an artificial marble plate as set forth in claim 14, wherein the raw material compound includes one or more thermosetting resins selected from the group consisting of unsaturated polyester resin, acrylate resin and methacrylate resin, one or more fillers selected from the group consisting of aluminum hydroxide, calcium carbonate, silicate and magnesium oxide, one or more reaction initiators selected from the group consisting of peroxide compound and perester compound, and acrylate compound as a crosslinking agent.

17. The method for continuously producing an artificial marble plate as set forth in claim 14, wherein the raw material compound for the artificial marble plate has a viscosity of 10 to 300 poise.

18. The method for continuously producing an artificial marble plate as set forth in claim 14, wherein the upper horizontal heating plate is located 0.5 to 1.0 mm above the gaskets.